

REMARKS

The last Office Action has been carefully considered.

It is noted that claims 1, 7 and 16 are rejected under 35 U.S.C. 102(b) over the European patent document to Winter, et al.

Claims 1, 7 and 16 are also rejected under 35 U.S.C. 102(b) over the German patent document to Wittig.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent to Winter in view of the applicant's submitted prior art, Figure 2.

Claim 3 is rejected under 35 U.S.C. 103(a) over the patent to Wittig in view of the patent to Winter.

Claim 4 is rejected under 35 U.S.C. 103(a) over the patent to Wittig.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) over the patent to Wittig in view of the applicant's submitted prior art Figure 2.

Also, the drawings and claims 1-16 are objected to.

In connection with the Examiner's objection to the drawings, applicants, as requested, submitted new formal drawings, in which reference 66 was removed, and Figure 2 was identified as prior art. It is believed that the formal drawings should be considered as acceptable.

In connection with the Examiner's rejection of the claims over the art, applicants have maintained claim 1, the broadest claim on file, and added claims 17-22. Claim 16, in addition to the original features of claim 1, specifically defines that the driven shaft is formed as a spindle shaft 16 and the driven wheel is arranged inside the transmission housing. This is disclosed on page 3, lines 23-27 and shown in Figure 3.

Claim 17 includes the features of claim 1 and in addition defines that the driven wheel is formed as a synthetic plastic screw wheel which is fixed axially on the driven shaft, as disclosed in particular on page 2, lines 23-27, and illustrated in Figure 3.

Claim 18, in addition to the features of claim 1, defines that the driven shaft 28 is axially guided by means of a running disc 32, wherein the running disc is supported in the transmission housing. This is disclosed on page 8, lines 20-24, and the running disc is arranged additionally to the supporting elements 38 as shown in Figure 6.

Claim 19, in addition to the features of claim 1, defines that the supporting element has an axial support surface, with which the supporting element is supported axially on an inner side of the transmission housing.

Claim 20, in addition to the features of claim 1, defines that the driven wheel is directly supported against the supporting element when axial force action is applied from outside, and no further components are arranged axially between the driven shaft and the supporting element.

Claim 21 defines the features of original claims 1 and 5. In other words, in addition to the features of claim 1, it defines that the drive shaft has a bead which is engaged by the driven shaft and has an outer diameter greater than an inner diameter of the supporting element.

It is respectfully submitted that the new features of the present invention which are now defined in the claims are not disclosed in the references and can not be derived from them as a matter of obviousness.

As disclosed in the description of the present application, the patent to Winter also teaches a seat adjustment device which has a safety feature against a crush in a traffic accident. A screw transmission 18 is rotatably connected with a screw shaft 20 and a screw wheel 24 in a transmission housing 28 composed of synthetic plastic, as explained in column 3, lines 12-16. In other words, contrary to the Examiner's opinion expressed in the Office Action, the transmission housing in the patent to Winter is identified with reference numeral 28 and not with reference numeral 42. In accordance with the patent to Winter the component 42 represents a mechanical supporting part 42, which is formed as a bracket with two U-legs 44 and a web 47 connecting them with one another, as explained in column 3, lines 32-40.

The Examiner interpreted the supporting bracket 42 in the Office Action as the transmission housing. This clearly represents a hindsight consideration or an ex-post analysis which is not permissible in rejecting the claims. With such an approach, the whole chassis of the

vehicle can be considered as a housing for the adjusting drive or the screw transmission, which for a person skilled in the art of course would clearly represent an error. In the patent Winter both the supporting bracket 42 and also the threaded nut 52 which can be considered as a supporting element, are clearly arranged outside of the transmission housing 28, so that in the event of a crash accident the screw wheel 24 can not be directly supported against the threaded nut 52 or the supporting bracket 42.

In view of the above presented considerations it is believed to be clear that the patent to Winter does not provide any hint or suggestion for the following features which are now defined in the amended claim 1:

- A. The driven wheel 24 and the supporting element 32 are not arranged axially near one another, since as clearly shown in Figure 1, the transmission housing 28 is arranged between them;
  
- B. An action of outer force (crash) can not cause the abutment of the driven wheel 24 directly against the supporting element 52, since the transmission housing 28 is located between them;

C. Since the supporting element 52 is not arranged between the driven shaft 28 and the inner side of a transmission housing 28, but instead outside of the transmission housing, between an outer wall of the same and the bracket 42.

The advantage of the device in accordance with the present invention is that the supporting element is arranged inside the transmission housing so that the driven wheel can be supported directly on the supporting element, without additional components between them. Therefore the expensive structural space-intense construction of an additional supporting bracket 42 disclosed in the patent to Winter is dispensed with.

The patent to Wittig discloses a construction which is very remote from the present invention, since it teaches an eccentric transmission and no spindle drive. Via a screw 12, a screw wheel 27 is driven, which is connected for joint rotation with a hollow shaft 24. There the drive shaft 37 with the driven pinion 39 is not connected for joint rotation with the driven wheel 27, but instead via the both toothings 31 and 34 with a greater transmission ratio rotates through the hollow tooth wheel 33 relative to the drive wheel 27. This is disclosed in column 2, lines 65-68: rotatably supported.

Since such an eccentric transmission has two movable parts, for example a seat back turnable relative to a seat surface, possible crush forces act not in an axial direction but instead tangentially to the shaft 37 via the pinion 39 or via the transmission housing 13 on the transmission. Therefore there is no problem, which is solved by the applicant's invention, namely to hold the transmission spindle also during a crash accident in the transmission housing.

If in the transmission disclosed in the patent to Wittig a high axial force acts, the driven wheel 27, 24 does not receive any axial forces, since the driven wheel is not fixedly connected with the shaft 37. For receiving of axial forces the shaft 37 is supported completely independently from the driven wheel 27, 24, through the bearing bush 38 mounted by a clamping ring on the transmission housing 13.

The device of the present invention defined in the amended claim 1 differs from the construction disclosed in the patent to Wittig by the following features:

A. The driven wheel 27, 24 is not supported on the driven shaft 37 for joint rotation with it, since contrary to the opinion expressed in the Office Action, the eccentric region 35 of the driven wheel is supported via the

roller bearing 29 rotatably relative to the toothed wheel 30, since it is connected through the hollow wheel 33 and the formation 35 with the shaft 37;

B. The driven wheel 27, 24 is not arranged so that during action of an outer axial force the driven wheel 24 can directly support on the supporting element 38. The reason for this is that the shaft 37 is supported axially displaceably relative to the driven wheel 24. Therefore, the driven wheel 24 during action of an axial force is not loaded and thereby not pressed against the bearing bush 38 of the shaft 37;

C. The supporting element 38 is not arranged between the driving wheel 24 and the inner side of the transmission housing 13, but instead only near to the driven wheel 24 and housing 13. The supporting surface of the supporting element 38 is located however clearly outside of the transmission housing 13, since the transmission housing 13, and not the driven wheel 24, is axially supported on a collar of the supporting element 38.

In view of the above presented remarks and amendments, it is believed that claim 1 as amended clearly and patentably distinguishes over

the prior art and represented by the patents to Winter and Wittig and should be allowed.

As for the dependent claims, these claims depend on claim 1, they share its presumably allowable features and therefore they should be allowed as well.

Finally, claims 17-22 define the new features of the present invention which also patentably distinguish the present invention from the prior art, and therefore these independent claims should be considered also as allowable.

Reconsideration and allowance of the present application is most respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Alternatively, should the Examiner feel that a personal discussion might be

helpful in advancing this case to allowance, he is invited to telephone the undersigned (at 631-549-4700).

Respectfully submitted,



Michael J. Striker  
Attorney for Applicants  
Reg. No. 27233